ABSTRACT

An optical system and associated method are provided. Included is a first branch capable of allowing light to pass therethrough in a forward direction and a reverse direction. The first branch includes a first medium with a first refractive index (n_1), and a first end and a second end. Also included is a second branch capable of allowing light to pass therethrough in the forward direction. The second branch includes a second medium with a second refractive index (n_2, with $n_2 < n_1$), and a first end and a second end. The second end of the second branch is further coupled to the first branch to form an angle (ϑ_2). In use, $\vartheta_1 \geq \sin^{-1}(n_2 / n_1)$ in order to prevent the light passing through the first branch in the reverse direction from passing into the second branch, where ϑ_1 is the incident angle of the light passing in the reverse direction from the first branch to the second branch.